

DEPARTMENT of ENVIRONMENTAL SERVICES
Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: CARRIGAIN POND	Lake Area (ha):	2.83
Town: LINCOLN	Maximum depth (m):	9.0
County: Grafton	Mean depth (m):	3.3
River Basin: Merrimack	Volume (m ³):	94500
Latitude: 44°05'13" N	Relative depth:	4.8
Longitude: 71°27'41" W	Shore configuration:	---
Elevation (ft): 3190	Areal water load (m/yr):	13.46
Shore length (m): 500	Flushing rate (yr ⁻¹):	4.00
Watershed area (ha): 33.7	P retention coeff.:	0.52
% watershed ponded: 0.0	Lake type:	natural

BIOLOGICAL:

23 August 1994

DOM. PHYTOPLANKTON (% TOTAL)	#1	NO PHYTOPLANKTON
	#2	SAMPLES COLLECTED
	#3	
PHYTOPLANKTON ABUNDANCE (units/mL)		
CHLOROPHYLL-A (µg/L)		3.63
DOM. ZOOPLANKTON (% TOTAL)	#1	NO ZOOPLANKTON
	#2	SAMPLES COLLECTED
	#3	
ROTIFERS/LITER		
MICROCRUSTACEA/LITER		
ZOOPLANKTON ABUNDANCE (#/L)		
VASCULAR PLANT ABUNDANCE		Scattered
SECCHI DISK TRANSPARENCY (m)		4.3
BOTTOM DISSOLVED OXYGEN (mg/L)		1.8
BACTERIA (E. coli, #/100 ml)	#1	23
	#2	
	#3	

SUMMER THERMAL STRATIFICATION:

stratified

Depth of thermocline (m): 5.6
Hypolimnion volume (m³): 4000
Anoxic volume (m³): None

CHEMICAL:

Lake: CARRIGAIN POND

Town: LINCOLN

		23 August 1994		
DEPTH (m)		1.0	4.0	7.0
pH (units)		5.6	5.4	5.4
A.N.C. (Alkalinity)		0.6	1.4	0.6
NITRATE NITROGEN		0.08	0.06	0.11
TOTAL KJELDAHL NITROGEN		0.13	0.16	0.26
TOTAL PHOSPHORUS		0.008	0.008	<0.001
CONDUCTIVITY (μ mhos/cm)		18.5	17.6	18.1
APPARENT COLOR (cpu)		55	55	58
MAGNESIUM		0.11		
CALCIUM		1.3		
SODIUM		0.7		
POTASSIUM		0.48		
CHLORIDE		< 2	< 2	< 2
SULFATE		4	4	4
TN : TP		26	28	
CALCITE SATURATION INDEX		5.8		

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1994

D.O. S.D. PLANT CHL TOTAL CLASS

1	2	1	0	4	Oligo.
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COMMENTS:

1. This is a remote, high elevation pond in the White Mountain National Forest that was sampled jointly with the NH Fish and Game Department. It has been sampled annually since 1985 by helicopter for acid rain related parameters.
2. Access is by bushwhacking; there is no trail to the pond.
3. The pond was not sampled during the winter.
4. This is a tea-colored acid pond with little buffering capacity. No fish were collected in Fish and Game's nets.

Carrigain Pond

Lincoln

N

111-22

10

20

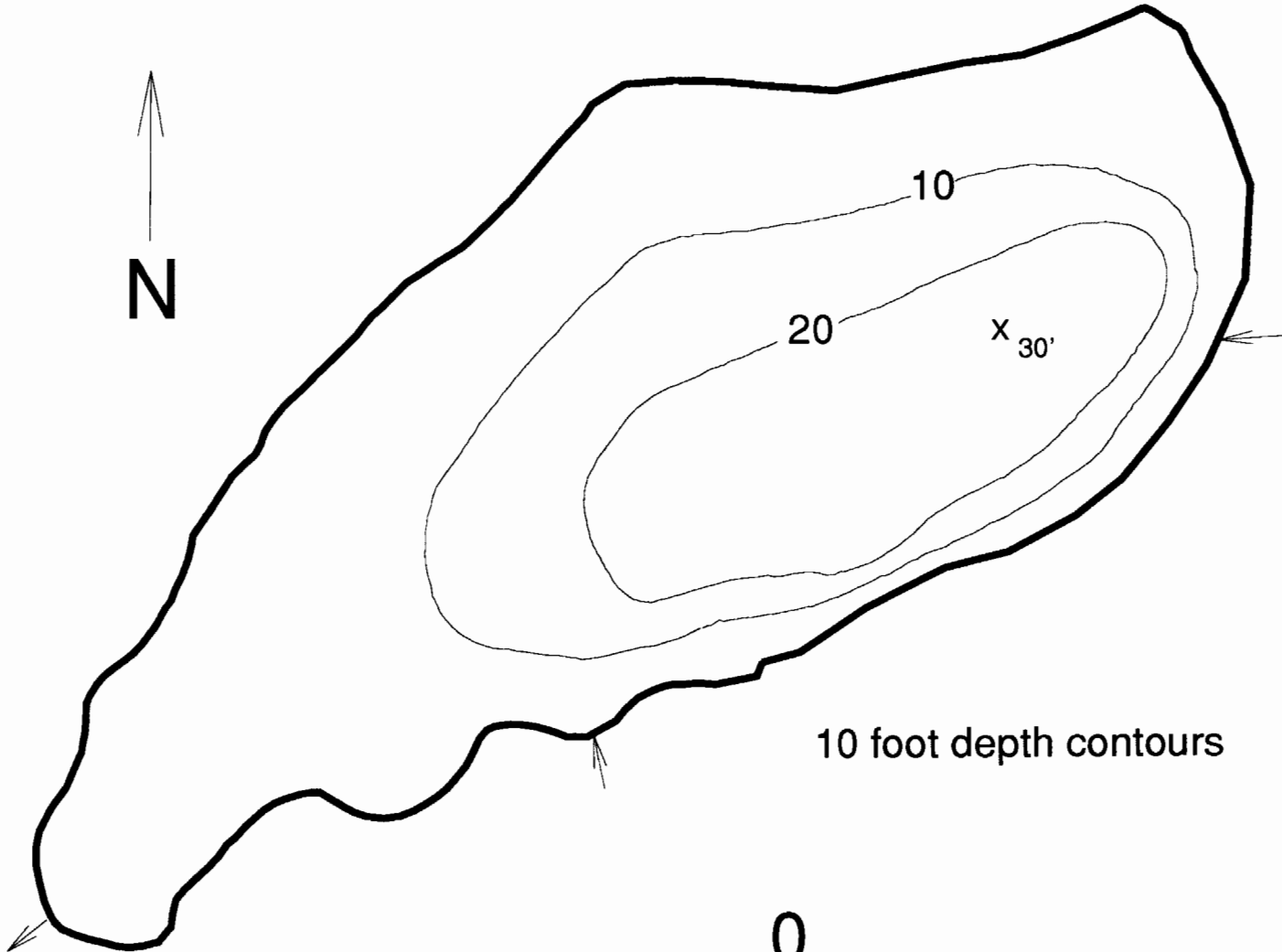
x 30'

10 foot depth contours

0

0.1

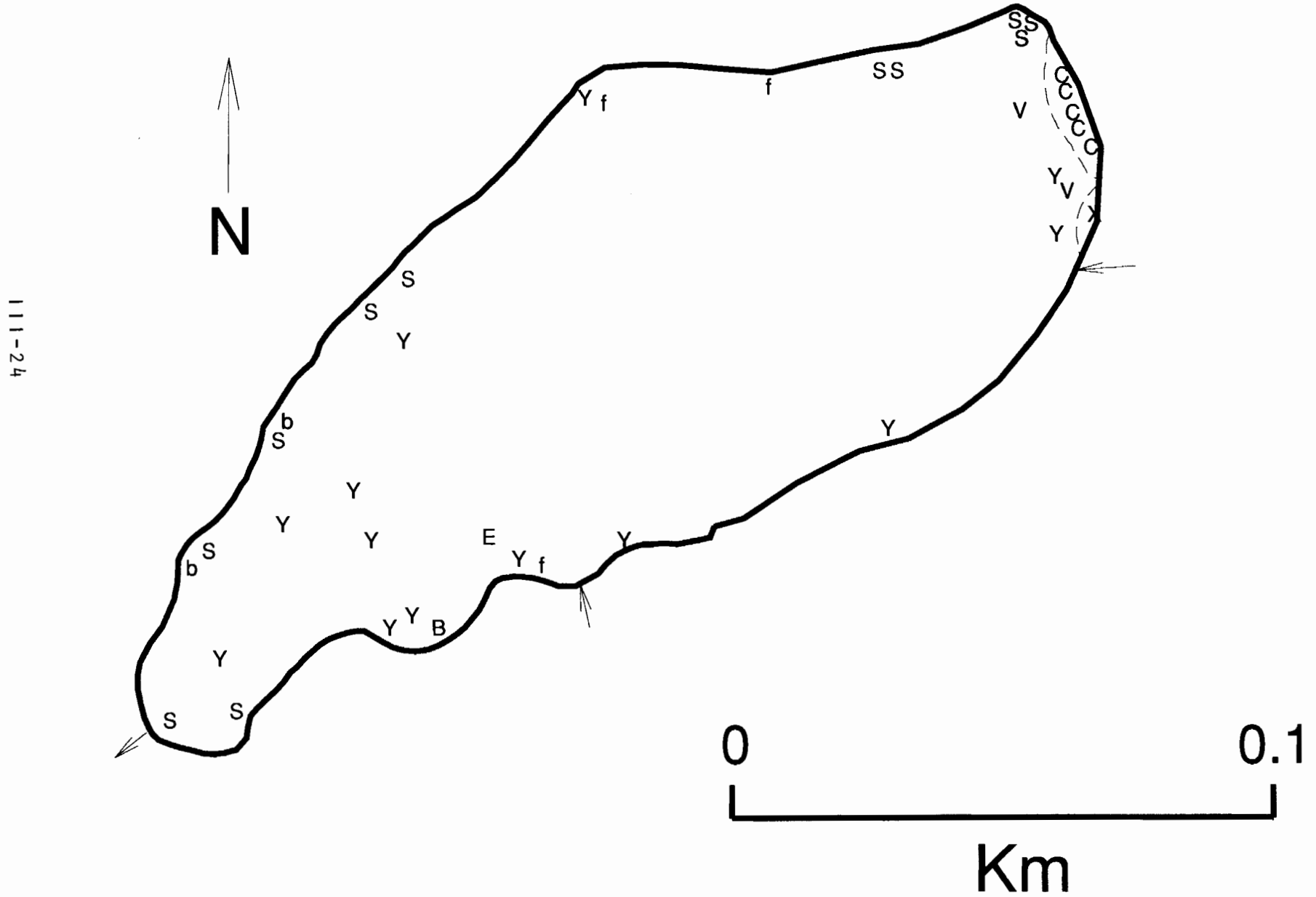
Km



[illegible]

Carrigain Pond

Lincoln



AQUATIC PLANT SURVEY

LAKE: CARRIGAIN POND

TOWN: LINCOLN

DATE: 08/23/94

[illegible]

OVERALL ABUNDANCE: Scattered

GENERAL OBSERVATIONS:

1. Sedges and sterile thread-like leaves were abundant along the eastern shoreline.
2. Leatherleaf and high-bush blueberries surrounded the entire pond but are not depicted on the map.